Cunningham Radiotron

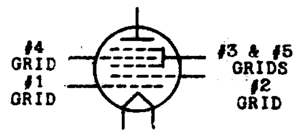
RCA-1A6

1A6

PENTAGRID CONVERTER

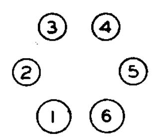
Filament	Coated		
Voltage	2.0	d-c	volts
Current	0.060		amp.

Direct Interelectrode Capacitances (approx.):



$C_{g_4 p}$	0.25[⊙]	μμf
$C_{g_4 g_2}$	0.2[⊙]	μμf
$C_{g_4 g_1}$	0.1[⊙]	μμf
$C_{g_1 g_2}$	0.8	μμf
$C_{g_4(k+g_1+g_2+g_3+g_5+p)}$ = R-F Input	10.5	μμf
$C_{g_2(k+g_1+g_3+g_4+g_5+p)}$ = Osc. Output	6	μμf
$C_{g_1(k+g_2+g_3+g_4+g_5+p)}$ = Osc. Input	5	μμf
$C_{p(k+g_1+g_2+g_3+g_4+g_5)}$ = Mixer Output	9	μμf

Overall Length	4-9/32" to 4-17/32"
Maximum Diameter	1-9/16"
Bulb	ST-12
Cap	Small Metal
Base	Small 6-Pin



BOTTOM VIEW

Pin 1-Filament+
Pin 2-Plate
Pin 3-Grid #2
Pin 4-Grid #1
Pin 5-Grids #3 & #5
Pin 6-Filament-
Cap -Grid #4

CONVERTER SERVICE

Plate Voltage	180 max.	volts
Screen (Grids #3 & #5) Voltage	67.5 max.	volts
Anode-Grid (Grid #2) Voltage	135 max.	volts
Anode-Grid Voltage Supply*	180 max.	volts
Control-Grid (Grid #4) Voltage	-3 min.	volts
Total Cathode Current	9 max.	ma.

Typical Operation:

Filament	2.0	2.0	d-c volts
Plate	135	180	volts
Screen	67.5	67.5	volts
Anode-Grid	135	135	volts
Anode-Grid Supply	135	180*	volts
Control-Grid	-3	-3	volts
Oscillator-Grid (Grid #1) Res.	50000	50000	ohms
Plate Resistance	0.4	0.5	megohm
Conversion Cond.	275	300	μmhos
Conversion Cond. at -22.5 volts on Grid #4	4	4	μmhos
Plate Current	1.2	1.3	ma.
Screen Current	2.5	2.4	ma.
Anode-Grid Current	2.3	2.3	ma.
Oscillator-Grid Cur.	0.2	0.2	ma.
Total Cathode Current	6.2	6.2	ma.

*Applied through a 20000-ohm voltage-dropping resistor, by-passed by 0.1 μf condenser ←

The mutual conductance of the oscillator portion (not oscillating) of the 1A6 is 425 micromhos under the following conditions: plate voltage, 135 to 180 volts; screen voltage, 67.5 volts; anode-grid voltage (no voltage-dropping resistor), 135 volts; and oscillator-grid voltage, 0 volts. Under these same conditions, the anode-grid current is 2.3 milliamperes.

⊙ With shield-can.

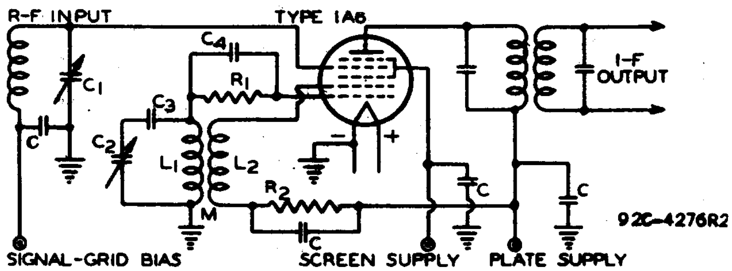
← Indicates a change

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

1A6

Cunningham Radiotron
RCA-1A6
PENTAGRID CONVERTER

TYPICAL PENTAGRID CONVERTER CIRCUIT

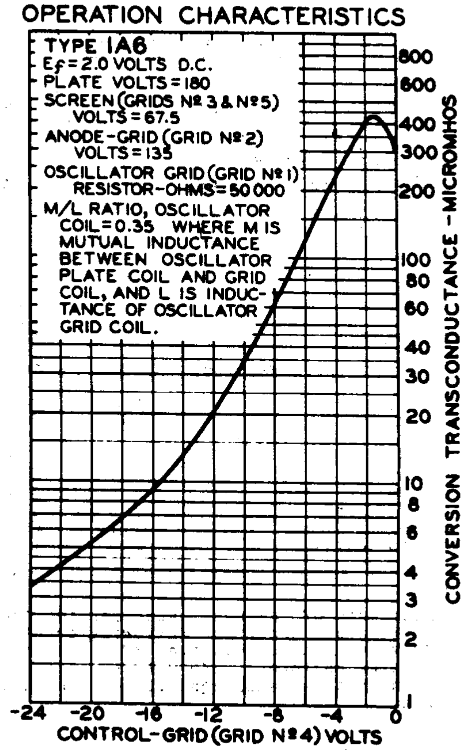


C = 0.1 µf
C_1 = } GANGED VARIABLE CONDENSERS
C_2 =
C_3 = PADDING CONDENSER
C_4 = GRID CONDENSER OF 200 µµf
L_1 = OSCILLATOR GRID INDUCTANCE } COUPLED
L_2 = OSCILLATOR PLATE INDUCTANCE

M = MUTUAL INDUCTANCE OF L_1 AND L_2
R_1 = OSCILLATOR GRID LEAK
R_2 = VOLTAGE DROPPING RESISTOR OF 20000 OHMS
GRID #2 VOLTS SHOULD BE HIGHER THAN SCREEN VOLTS

The license extended to the purchaser of tubes appears in the License Notice accompanying them. Information contained herein is furnished without assuming any obligations.

OPERATION CHARACTERISTICS



92C-5343